Listing of Claims

Claim 1 (previously presented): A structure for adjusting waveforms of optical filters used in a Dense Wavelength Division Multiplexing system, said structure comprising:

an input optical fiber and a return optical fiber;

a biporose pigtail with two holes defined therein, the input and return optical fibers being secured in the holes;

a graded index lens coupled with the pigtail at a first end of the graded index lens, whereby signals transmitted from the input fiber can enter the graded index lens; and

a filter being parallel to and joined with a second end of the graded index lens, wherein the second end is opposite to the first end of the graded index lens, and the second end of the graded index lens is oriented at a first acute angle relative to a line that is perpendicular to an optical axis thereof, whereby the reflected signal from the filter can be transmitted through the graded index lens to the return fiber.

Claim 2 (original): The structure as described in claim 1, wherein the holes of the pigtail are parallel to a center axis of the pigtail.

Claim 3 (original): The structure as described in claim 2, wherein the holes are disposed at opposite sides of the center axis of the pigtail, but at different distances from the center axis.

Claim 4 (original): The structure as described in claim 1, wherein an end of

the pigtail coupled with the graded index lens is oriented at a second acute angle relative to a line that is perpendicular to a center axis of the pigtail.

Claim 5 (original): The structure as described in claim 4, wherein the second acute angle is in the range of approximately 6-8 degrees.

Claim 6 (original): The structure as described in claim 1, wherein the first end of the graded index lens is oriented at a third acute angle relative to a line that is perpendicular to a center axis of the pigtail.

Claim 7 (original): The structure as described in claim 6, wherein the third acute angle is in the range of approximately 6-8 degrees.

Claim 8 (original): The structure as described in claim 1, wherein the filter is a thin film filter.

Claim 9 (currently amended): A method of adjusting waveforms of an optical filter used in a Dense Wavelength Division Multiplexing system, the optical filter including a pigtail, an input optical fiber and a return optical fiber to be received in the pigtail, a graded index lens coupled with the pigtail at the first end of the graded index lens, a filter joined with the graded index lens at a second end of the graded index lens, wherein the second end is opposite to the first end, the method comprising the steps of:

measuring an actual center-wavelength of the filter;

determining a difference between the actual center-wavelength and a desired

center-wavelength of the filter;

determining an angle of the second end of the graded index lens relative to an optical axis of the graded index lens that will yield the desired center-wavelength, further determining distances of two holes from a center axis of the pigtail that will yield the desired center-wavelength, said two holes ~~being~~ to be formed in the pigtail to receive the input and return optical fibers;

grinding the second end to obtain the determined angle, further forming the two holes in the pigtail to obtain the determined distances;

adhering the filter to the second end of the graded index lens;

integrating the pigtail with the combination of the filter and the graded index lens; and

securing the input and return optical fibers within the two holes inside the biporose pigtail.

Claim 10 (original): The method as described in claim 9, wherein the filter is a thin film filter.

Claim 11 (original): The method as described in claim 9, wherein an end of the pigtail contiguous with the graded index lens is oriented at an acute angle relative to a line that is perpendicular to the optical axis of the pigtail.

Claim 12 (original): The method as described in claim 11, wherein the acute angle is in the range of approximately 6-8 degrees.

Claim 13 (original): The method as described in claim 9, wherein an end of

the graded index lens contiguous with the pigtail is oriented at an acute angle relative to a line that is perpendicular to the optical axis of the graded index lens.

Claim 14 (original): The method as described in claim 13, wherein the acute angle is in the range of approximately 6-8 degrees.

Claim 15 (original): The method as described in claim 9, wherein the holes are parallel to the center axis of the pigtail.

Claim 16 (original): The method as described in claim 9, wherein the holes are disposed at opposite sides of the center axis of the pigtail, but at different distances from the center axis.

Claims 17-22 (canceled)

Claim 23 (currently amended): A structure for adjusting waveforms of optical filters used in a Dense Wavelength Division Multiplexing system, comprising:

an input optical fiber and a return optical fiber;

a biporose pigtail with two holes defined therein, said two holes being at predetermined different distances from and parallel to a center axis of the pigtail, the input and return optical fibers being secured in the holes;

a graded index lens coupled with the pigtail at a first end of the graded index lens, whereby signals transmitted from the input fiber can enter the graded index lens; and

a filter adhering to a second end of the graded index lens, said second end

being opposite to the first end of the graded index lens.

Claim 24 (previously presented): The structure as described in claim 23, wherein an end of the pigtail coupled with the graded index lens is oriented at a first angle relative to the center axis of the pigtail.

Claim 25 (previously presented): The structure as described in claim 24, wherein the first end of the graded index lens is oriented at a second angle relative to a center axis of the graded index lens.

Claim 26 (previously presented): The structure as described in claim 25, wherein the second end of the graded index lens is oriented at a third angle relative to the center axis of the graded index lens.

Claim 27 (previously presented): The structure as described in claim 23, wherein a face defined by the second end of the lens is roughly parallel to the filter.

Claim 28 (previously presented): The structure as described in claim 23, wherein the two holes commonly define roughly an imaginary plane, said filter is tilted with an angle about an axis which is perpendicular to said imaginary plane.